

IVLEVA, I.V.

Biological principles of raising white enchytraeids (*Enchytraeus albidus*) for market. Trudy probl. i tem. sov. no.7:84-88 '57.
(Enchytracidae) (Fishes--Food) (MLRA 10:4)

IVLEVA, I.V.

Respiration of *Enchytraeus albidus* Henle. Zool. zhur. 39
no.2:165-175 F '60. (MIRA 13:6)

L. Laboratory of Hydrobiology, All-Union Research Institute of
Lake and River Fishery Management, Leningrad.
(Oligochaeta) (Respiration)

IVLEVA, I.V.

Heat resistance of the muscle tissue in polychaetes of the Mediterranean basin. Zool. zhur. 41 no.12:1798-1810 D '62. (MIRA 16:3)

1. Sebastopol Biological Station of the Academy of Sciences of the Ukrainian S.S.R.

(Mediterranean Sea--Polychaeta) (Black Sea--Polychaeta)
(Heat--Physiological effect)

TRAPEZNIKOV, A.A.; CHUPEYEV, M.A.; Prinimala uchastiye: IVLEV, L.D.

Effect of surface-active agents on the characteristics of paint
systems. Lakokras.mat.i ikh prim. no.5:17-24 '62. (MIRA 16:1)

1. Institut fizicheskoy khimii AN SSSR i Gosudarstvennyy nauchno-
issledovatel'skiy i proyektnyy institut lakokrasochnoy
promyshlennosti.

(Paint) (Surface-active agents)

CHUPEYEV, M.A.; MUKHANOVA, V.S.; MARKOVSKAYA, M.N.; BOLOMINA, S.S.; IVLEVVA,
L.D.

Use of surface-active agents in the grinding of carbon black in al-
kyd binding substances. Lakekras, mat. i ikh prim. no.3:77-78 '63.

(MIRA 16:9)

(Paint) (Carbon black) (Surface-active agents)

DULOVA, V.I.; IVLEVA, L.P.

Strength of acids in esters. Uzb.khim.zhur. 6 no.2:28-35
'62. (MIRA 15:7)

1. Tashkentskiy gosudarstvennyy universitet imeni V.I. Lenina.
(Acids) (Esters)

VOLOGDIN, I.V.; IVLEVA, M.K.

Increasing the productivity in welding pipelines. Biul.tekh.
inform.po stroi. 5 no.9:17-19 8 '59. (MIRA 12:12)
(Gas pipes--Welding)

BARON, Lazar Izrailevich; VLASOV, Orest Yevgen'yevich; SMIRNOV, Sergey
Anatol'yevich; TERMETCHIKOV, Marat Karimovich; LEDOVSKAYA, V.V.,
otv. red.; IVLEVA, N.P., red.; BERESLAVSKAYA, L.Sh., tekhn.
red.; GALANOVA, V.V., tekhn. red.

[Effect of the shape of the blasting charge on the results of
the explosion] Vliianie formy zariada vybrosa na rezul'tat
vzryva. Moskva, TSentr.in-t tekhn.informatsii ugol'noi pro-
myshl., 1959. 15 p. (Blasting) (MIRA 15:1)

BARON, Lazar' Izrailevich, prof., doktor tekhn. nauk; TIKHOMIROVA, Vera Ivanovna, inzh.; LEDOVSKAYA, V.V., otv. red.; IVLEVA, N.P., red.; SHKLYAR, S.Ya., tekhn. red.

[Statistical analysis of indices of large-scale blasts of vertical borehole charges in open-pit mines] Opyt statisticheskogo analiza pokazatelei massovykh vzryvov vertikal'nykh skvazhinnnykh zariadov v kar'erakh. Moskva, M-vo stroit. RSFSR, 1959. 33p. (MIRA 15:1)
(Blasting) (Strip mining)

BR

ACCESSION NR: AT4030810 S/0000/63/000/000/0300/0308

AUTHOR: Presnov, V. A.; Rubashov, M. A.; Yakubanya, M. P.; Stroganova, V. V.; Ivleva, O. M.

TITLE: The physico-chemical nature of the formation of stable bonds between dissimilar substances

SOURCE: AN UkrSSR. Institut metallokeramiki i spetsial'nykh splavov. Poverkhnostnye yavleniya v rasplavakh i protsessakh poroshkovoy metallurgii (surface phenomena in liquid metals and processes in powder metallurgy). Kiev, Izd-vo AN UkrSSR, 1963, 300-308

TOPIC TAGS: glass, ceramics, metal, oxygen, oxide, acidity, alkalinity, rare earth element, alumina

ABSTRACT: The authors investigated the soldering of dissimilar substances such as glass, ceramics, and metal, and traced the historical basis of this research. Through a series of mathematical arguments they distributed the oxides of metals according to the increase of their acidic properties. The reaction of rare-earth element oxides La_2O_3 and X_2O_3 with Al_2O_3 was studied and results were presented in tables. The mechanism for forming the complex compound, which leads to the origin of a

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stable bond between dissimilar substances, was attributed to electron processes. With the approach of the oxides of aluminum and the rare-earth elements, suitable conditions arose before the donor-acceptor interaction. Atoms of aluminum oxide served as the acceptors and the atoms of the rare-earth oxides served as the donor. However, Al_2O_3 with B_2O_3 also yields a complex compound with aluminum oxide serving as the electron donor. Orig. art. has: 3 tables and 7 formulas.

ASSOCIATION: Sibirskiy fiziko-tehnicheskiy institut, Tomsk (Siberian Physical Engineering Institute).

SUBMITTED: 23Nov63 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: ML NO REF Sov: 008 OTHER: 001

Card 2/2

L 00709-56 EWA(h)/EWT(1)/EWT(m)/EWP(h)/T/EWP(t) IJP(c) JD/JG/GS

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ACCESSION NR: AT5020467

UR/0000/64/000/000/0205/0218

AUTHOR: Vyatkin, A. P.; Ivleva, O. M.; Krasil'nikova, L. N.; Presnov, V. A. (Professor); Selivanov, B. A.; Yakubanya, M. P.

TITLE: Process of formation and structure of alloyed contacts of gallium arsenide with gold and silver

27 17 27

SOURCE: Mezhyuzovskaya nauchno-tehnicheskaya konferentsiya po fizike poluprovodnikov (Poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 205-218

TOPIC TAGS: gallium arsenide, gold alloy, silver alloy, semiconductor research, semiconducting material

ABSTRACT: The authors study the process of formation, structure and some properties of fused gallium arsenide contacts with gold and silver. The melting points, coefficients of thermal expansion and microhardness of the various alloys formed at the semiconductor-metal contact were measured. Alloys of gallium arsenide with silver have a melting point of 750-760°C. The melting point of the gallium arsenide-gold alloy produced in a vacuum is 350-360°C, while that produced in an argon

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atmosphere is 575°C. This indicates that the composition of alloys of gallium arsenide with gold depends on the conditions under which the alloys are formed. Alloys with gold prepared in argon showed the least change in the coefficient of linear expansion. Alloys produced in vacuum have coefficients of linear expansion close to those of the pure metals. All the alloys differ considerably in their expansion coefficients from gallium arsenide, which may be the reason for the considerable thermal stresses which arise in alloyed contacts of gallium arsenide with gold and silver. Microhardness for all alloys is considerably lower than that of gallium arsenide. X-ray structural analysis shows that the gallium arsenide-silver contacts are composed of eutectic silver and polycrystalline GaAs. The interaction between gallium arsenide and gold in vacuum produces a chemical compound. The gallium arsenide-gold contact produced in argon gas is composed of eutectic gold and gallium arsenide. Contacts of gallium arsenide with gold and silver may be used as ohmic contacts. Orig. art. has: 7 figures, 3 tables.

ASSOCIATION: Sibirskiy fiziko-tehnicheskiy institut pri Tomskom gosudarstvennom universitet im V. V. Kuybysheva (Siberian Physicotechnical Institute at the Tomsk State University 44,55)

SUBMITTED: 06Oct64

NO REF SOV: 010

ENCL: 00

SUB CODE: MM, SS

OTHER: 000

Card 2/2

Ivleva, S. A.

USSR/ Physics - Photography

FD-1046

Card 1/1 : Pub. 153 - 17/23

Authors : Borin, A. V.; Makovskiy, A. F.; Odintsov, M. G.; Ivleva, S. A.; Avvakumov, V. I.

Title : Photographic material with constant value of the coefficient of contrast in the visible part of the spectrum.

Periodical : Zhur. tekhn. fiz., 24, 1499-1502, Aug 1954

Abstract : Notes that photographic materials with constant coefficient of contrast independent of wave length are needed in solving a number of problems of spectral analysis and astrophysics. Investigates the possibility of obtaining such materials. Concludes that the absolute magnitude of contrast varies but the character of the dependence of the contrast coefficient, gamma, on wave length remains unchanged. Eight references, 4 USSR (e.g. A. V. Borin, D. Ya. Martynov, T. I. Smolko, 1952; A. V. Barin, Z. I. Gratsianskaya, 1948).

Institution : --

Submitted : 1 November 1953

BORIN, A.V.; IVLEVA, S.A.

The synthesis of photographic emulsions using a continuous method.
Zhur. nauch. i prikl. fot. i kin. 2 no. 5-344-348, S-0 '57.

1. Fabrika kinoplenki, Kazan'.
(Photographic emulsions) (MIRA 10-11)

IVLEVA, V.P.; PSHONIK, A.T., nauchnyy rukovoditel', prof.

Interaction of unconditioned vascular, respiratory, and salivary reactions in healthy persons. Uch. zap. Kras. gos. ped. inst. 15:265-274 '59.

(Reflexes)

(MIRA 14:12)

S/180/60/000/01/005/027
E071/E135

AUTHORS: Vigdorovich, V.N., Ivleva, V.S. and Krol', L.Ya.
(Moscow)

TITLE: On the Purification of Antimony by the Method of Zonal
Recrystallization

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Metallurgiya i toplivo, 1960, Nr 1, pp 44-49 (USSR)

ABSTRACT: The results are given of an evaluation and classification
of admixtures present in antimony from the point of view
of the nature of their interaction with antimony.
Furthermore, the results are reported of qualitative and
quantitative analyses of the admixtures present in the
starting and purified product. On the basis of analysis
of available equilibrium diagrams characterising the
interaction of antimony with corresponding admixtures,
the latter were classified according to the ease with
which they can be removed by zonal recrystallization.
Admixtures of elements, the solubility of which in
antimony in the solid state is low, are classified as
easily removable. Admixtures of elements which are
better soluble in solid antimony are considered as being

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On the Purification of Antimony by the Method of Zonal
Recrystallization

difficult to remove and classified according to their partition coefficients (Fig 2). The behaviour of admixtures in antimony during zonal recrystallization was experimentally tested at various speeds of the melting zone: 4, 2 and 1 mm/min during 3, 5, 8, 10, 15 and 20 passes. The width of the melting zone was 2 to 3 cm, the length of ingots 300 mm. The ingots were kept in graphite boats in an atmosphere of argon. The contents of As, Fe, Si, S and P were determined chemically; of other elements spectroscopically. A specially developed method combining chemical enrichment followed by spectroscopic analysis (no details given) was used for the determination of Pb, Cu, Ni, Co, In, Al and Cd. The method of radioactive analysis was used for Ni, Co, Tl, As (the method was developed by A.I. Kulak, Ref 13) and Mn, Se, Cu, Zn, Ga, As, P and Cr (the method was developed by E.Ye. Rakovskiy and Yu.V. Yakovlev). Flame photometry was used for the determination of Na, K and Ca. The method of radioactive isotopes was used for iron due to the fact that some of

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S/180/60/000/006/006/030
E201/E335

AUTHORS: Vigdorovich, V.N. and Ivleva, V.S. (Moscow)
TITLE: An Approximate Method for Graphical Determination
of the Effective Distribution Coefficients in Zone
Recrystallisation

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye
tekhnicheskikh nauk, Metallurgiya i toplivo,
1960, No. 6, pp. 51 - 55

TEXT: The paper begins with a brief survey of existing
approximate methods (Ref. 1) of calculating the effective
distribution coefficient (K) in purification by zone melting.
The authors propose a graphical method for calculation of K ,
assuming perfect mixing in the molten zone, absence of
diffusion equalisation in the solid phase, and independence
of the distribution coefficient of temperature. These
assumptions lead to

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An Approximate Method for Graphical Determination of the
Effective Distribution Coefficients in Zone Recrystallisation

(here $a = \ell/b$). The point of intersection of the two
functions given by Eqs. (6) and (7) gives the value of K ;
the two functions are shown in Figs. 1 and 2, respectively.
The proposed method is illustrated by a calculation of the
distribution coefficient of silver, silicon, manganese and
chromium impurities in copper (Fig. 3 and Table 1), of copper,
silver and nickel impurities in antimony (Fig. 4a and Table 2)
and of lead, bismuth and tin impurities in antimony (Fig. 4b
and Table 3). The continuous and dashed curves in Fig. 4
denote, respectively, zone recrystallisation with and without
magnetic stirring. There are 4 figures, 3 tables and
5 references: 1 Soviet and 4 non-Soviet.

SUBMITTED: December 3, 1959

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S/180/61/000/002/004/012
E071/E435

AUTHORS: Vigdorovich, V.N., Ivleva, V.S. and Krol', L.Ya. (Moscow)

TITLE: On the Interaction of Admixtures During Zonal Recrystallization of Antimony

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1961, No.2, pp.72-76

TEXT: The problem of interaction of admixtures during purification of materials by recrystallization methods has been little studied. Therefore, the authors investigated the interaction of admixtures in the range of concentrations of 10^{-2} to 10^{-5} wt.% during zonal recrystallization of antimony. Two kinds of antimony, non-purified and purified by zonal recrystallization, were used for the experiment. Into the purified antimony additions of tin and bismuth, in the form of 4 to 5% alloys, were made. Samples were analysed for admixtures of copper, silver, nickel, iron, lead, tin, bismuth and arsenic by the spectroscopic method. The experiments were carried out in boats from purified graphite 300 mm long. The length of the

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molten zone was about 30 mm. The process of zonal recrystallization was carried out in an argon atmosphere at a velocity of 2 mm/min. The distribution of admixtures of tin and bismuth was studied after 10 and 20 passes. The initial content (wt.%) of admixtures is given in table 1 and the distribution of tin and bismuth along the length of the ingots (about 300 g) after zonal recrystallization is plotted in the figure. Although ingots with identical contents of tin and bismuth were not obtained (due to difficulties in precise alloying) yet the relative positions of the distribution curves indicate that the purification of ingot 1 containing about 0.2% of admixtures was more difficult than that of ingots 2 and 3 containing less admixtures (about 0.005%). Effective coefficients K of the distribution of tin and bismuth were calculated (Table 2). The calculation was done on the basis of analytical results obtained for the part of the ingot situated about 30 mm from the starting end (ℓ about 10% of the total length of the ingots). This part of the ingots was not affected by the dirty ends. After 10 passes there was no substantial difference in the effective distribution coefficients for tin in pure and contaminated

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antimony, however, the difference appeared after 20 passes. In the case of bismuth, the difference in the effective distribution coefficients in pure and contaminated antimony was established after 10 passes; after 20 passes the removal of bismuth from the pure ingot was so effective that its content was beyond the sensitivity of the analytical method used ($6 \times 10^{-5}\%$), therefore the distribution coefficient was only roughly evaluated. It was established in a previous experimental work (Ref.6) on the purification of antimony from admixtures that lead, tin, bismuths and arsenic represent a group of admixtures which are the most difficult to remove. The results obtained in the present work confirmed this conclusion but they also indicated that the removal of tin and particularly bismuth is more difficult in the presence of other admixtures. In the discussion of results the following alternative explanations of the above phenomena are offered:
a) Assuming a statistically uniform distribution of admixtures, the mean distance between atoms of admixtures in the impure metal would be about 3 to 4 and in the pure metal 300 to 350 Å. Thus in the first case the distances between atoms of the main admixture (Sn or Bi) are similar or larger than distances between

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atoms of other admixtures. They are also similar to the distances of inter-atomic interaction. Apparently such a ratio of concentrations is beneficial (at least from kinetic considerations) for the appearance of interaction between the main and other admixtures. In the second case the mean distance between atoms of the main admixture is many times smaller than mean distances between other admixtures. Such a ratio of concentrations has less influence on the behaviour of the main admixture during zonal recrystallization. However, it is pointed out that changes of conditions of interaction of admixtures in the diffusion layer are difficult to evaluate. It is possible that during zonal recrystallization an accumulation of admixtures at the crystallization front takes place, whereupon the interaction between the main and other admixtures in this layer may appear earlier than it would be expected on the assumption of their uniform distribution.

b) The experimental data can also be explained on the basis of ideas on the peculiar conditions of crystallization acting in the immediate neighbourhood of the solidification front (Ref.8: Chalmers, B., J.Metals, 1954, v.6, S.1, No.5, pp.519-533).
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It is possible that in the case of crystallization of impure antimony the conditions are more favourable for a more pronounced influence of concentration supercooling and, consequently, conditions for diffusionless crystallization acts are formed, causing irregularities in the solidification front and enclosures of the melt. This should lead to a deterioration in the effect of recrystallization separation, i.e. to values of the effective distribution coefficient closer to unity. B.A.Kolachev is mentioned for his contribution in this field. There are 1 figure, 3 tables and 8 references: 5 Soviet and 3 non-Soviet.

ASSOCIATION: Institut tsvetnykh metallov im. Kalinina "Giredmet" (Institute of Non-Ferrous Metals imeni Kalinin, "Giredmet")

SUBMITTED: June 24, 1960

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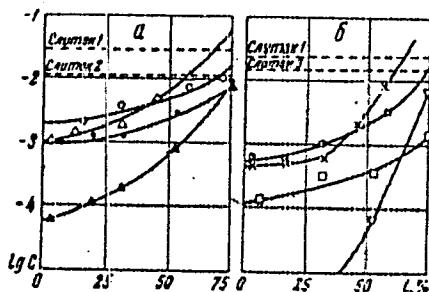
Figure. The distribution of admixtures Sn (Fig.a) and Bi (Fig.b) during zonal recrystallization of antimony.

Fig.a - after 10 passes (o - for ingot 1, • - for ingot 2)
after 20 passes (Δ - for ingot 1, \blacktriangle - for ingot 2)

Fig.b - after 10 passes (o - for ingot 1, \square - for ingot 3)
after 20 passes (x - for ingot 1, ∇ - for ingot 3)

broken lines indicate the corresponding levels of the starting concentrations of Sn and Bi in ingots.

СЛУМОК - ingot



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E071/E435Table 1. Content of admixtures in ingots of antimony used for zonal recrystallization

1 - ingot No.

2 - Wt.% of admixtures

Таблица 1

Содержание примесей в слятиках сурьмы, предназначенных для зонной перекристаллизации

Слиток	Содержание, вес. %							
	Cu	Ag	Ni	Fe	Pb	Sn	Bi	As
1	$3.2 \cdot 10^{-3}$	$3.4 \cdot 10^{-3}$	$2.3 \cdot 10^{-3}$	$7 \cdot 10^{-4}$	$3 \cdot 10^{-3}$	$2.7 \cdot 10^{-3}$	$2.4 \cdot 10^{-3}$	$1.3 \cdot 10^{-3}$
2	$9.0 \cdot 10^{-4}$	$3.0 \cdot 10^{-3}$	$1.7 \cdot 10^{-3}$	$6 \cdot 10^{-4}$	$1 \cdot 10^{-3}$	$1.1 \cdot 10^{-3}$	$7.0 \cdot 10^{-4}$	$5.0 \cdot 10^{-4}$
3	$8.0 \cdot 10^{-4}$	$4.0 \cdot 10^{-3}$	$1.6 \cdot 10^{-3}$	$6 \cdot 10^{-4}$	$8 \cdot 10^{-4}$	$2.0 \cdot 10^{-4}$	$1.4 \cdot 10^{-3}$	$5.0 \cdot 10^{-4}$

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Table 2. Effective coefficients of distribution K of admixtures during zonal recrystallization of antimony (for each admixture: top value - after 10 passes, bottom value - after 20 passes)

- 1 - admixtures
- 2 - K in ingots
- 3 - change in K, %

Эффективные коэффициенты распределения K процесс при зонной перекристаллизации сурьмы*

Примесь	K в слоях			Изменение K, %
	1	2	3	
Sn	0.60 0.70	0.59 0.60	— —	1.7 10.7
Bi	0.50 0.65	— —	0.43 ~0.40	10.3 02.5

* Для каждой примеси верхняя строка примеси — при 10 проходах зоны, нижняя — при 20.

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AUTHORS: Vigdorovich, V.N., Ivleva, V.S. and Krol', L.Ya.
(Moscow)

TITLE: Distribution of admixtures of arsenic and selenium in the zone refining of antimony

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1961, No.4, pp.29-30

TEXT: In an earlier paper (Ref.1: Izv.AN SSSR, OTN, Metallurgiya i toplivo, 1960, No.1) the authors studied the behaviour of numerous admixtures in zone refining of antimony. In this paper further information is given on the behaviour of arsenic and selenium and the influence of initial concentration on the effectiveness of eliminating these elements during refining is studied. The initial material contained the following admixtures (%): Cu, Pb, Ni - 10^{-3} to 10^{-4} , Ag - 10^{-4} to 10^{-5} , Sn - 10^{-4} , Fe $\sim 10^{-3}$, Bi - 10^{-5} , Zn, In, Ga, Al $< 10^{-4}$, B $< 3 \cdot 10^{-5}$. Arsenic was introduced in the form of a 2% alloy. The ingots were 150 mm long and the length of the molten zone was 15 mm. After zone refining (10 passes at a speed of 2 mm/min), the ingot was cut X
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longitudinally into four equal parts which were then crushed in a porcelain mortar, the powder was mixed and chemically analysed for arsenic content. The selenium was introduced in the form of the isotope Se^{75} . The experiments were carried out on ingots 280-300 mm long, with a molten zone of about 30 mm (10 passes at a speed of 2 mm/min). The obtained results are plotted in Figs.1 and 2, which give the logarithm of the concentration ($\lg C$) of the admixed arsenic (Fig.1) and selenium (Fig.2) along the length of the antimony ingot ℓ ; the dashed lines indicate the initial concentrations which, in %, amounted to: 1 - $6 \cdot 10^{-1}$, 2 - $8 \cdot 10^{-2}$, 3 - $9 \cdot 10^{-3}$ (Fig.1) and 1 - $2.5 \cdot 10^{-3}$, 2 - $7.5 \cdot 10^{-4}$, 3 - $4.5 \cdot 10^{-4}$ (Fig.2). The effective distribution coefficients were determined by an approximate graphical method and the obtained results were as follows:
a) for arsenic: concentration $6 \cdot 10^{-1}\%$ - 0.82, $8 \cdot 10^{-2}\%$ - 0.78 and $9 \cdot 10^{-3}\%$ - 0.82; b) for selenium: concentration $2.5 \cdot 10^{-3}\%$ - 0.57, $7.5 \cdot 10^{-4}\%$ - 0.52, $4.5 \cdot 10^{-4}\%$ - 0.59. The distribution coefficient of arsenic ($K = 0.8 \pm 0.1$) is unfavourable from the point of view of purifying antimony; the value calculated from the phase diagram

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is $K^o = 0.64$. The phase diagram of selenium and antimony is of the monotectic type and has a more favourable effective distribution coefficient ($K = 0.55 \pm 0.10$) from the point of view of zone refining. Within the concentration range of 10^{-1} to $10^{-4}\%$ both admixtures have a constant distribution coefficient as far as could be judged from the sensitivity of the methods used. There are 2 figures and 6 references: 3 Soviet and 3 non-Soviet. The two English-language references read as follows: Ref. 4: Thurmond, C.D., Struthers, J.D. J.Phys.Chem., 1953, v.57, p.831; Hansen, M., Anderko, K. Constitution of binary alloys. N.Y.-Toronto -London, 1958.

SUBMITTED: December 3, 1960

Card 3145

L 06131-67	EWT(m)/EWP(t)/ETI	LJP(c)	JD/JG
ACC NR:	AP6026708	SOURCE CODE: UR/0181/66/008/008/2472/2473	
AUTHOR: <u>Gulyayeva, A. S.</u> ; <u>Ivleva, V. S.</u> ; <u>Iglitsyn, M. I.</u>			
ORG: State Scientific Research and Design Institute of the Rare Metal Industry, Moscow (Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometall- cheskoy promyshlennosti)			
TITLE: Lifetime of excess charge carriers in <u>InSb</u> single crystals with <u>Ge</u> and <u>Au</u> im- purities			
SOURCE: <u>Fizika tverdogo tela</u> , v. 8, no. 8, 1966, 2472-2473			
TOPIC TAGS: indium compound, antimonide, carrier lifetime, recombination			
ABSTRACT: The object of the work was to determine the effect of doping InSb single crystals with Ge and Au impurities on the recombination of excess carriers. p-Type samples were obtained from the original n-type material (electron concentration 10^{14} cm^{-3}) by this doping. The carrier lifetimes τ_n were measured at 77-300 K by sta- tionary methods of measurement of the photomagnetic effect (τ_{pm}) and photoconductivity (τ_{pc}). The lifetime of electrons is inversely proportional to the concentration of traps. At 77 K, in samples doped with Ge, the quantity $\tau_n = \tau_{pm}$ changes by less than an order of magnitude as the Ge concentration increases by a factor of 200. This indicates that the recombination does not take place on Ge atoms. The lifetime data show that the Ge impurity does not affect the recombination of excess carriers. In the 77-170 K			
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range, the lifetimes in samples doped with Ge and Au are approximately the same. It is concluded that in this range, Ge and Au have no effect on the recombination of excess carriers, which takes place either on structural defects or on a residual impurity. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 31Jan66/ ORIG REF: 002/ OTH REF: 003

Card 2/2 *LLH*

IVLEVA, Ye.A., inzh.; GOFNER, A.M., kand.tekhn.nauk

Electrodes for fast welding. Svar.proizv. no.7129-30
J1 '60. (MIRA 13±?)

1. Nauchno-issledovatel'skiy institut Ministerstva
stroitel'stva RSFSR.
(Electric welding) (Electrodes)

IVLEVA, Ye.S.

Problem of the effect of psychic phase of secretion on results of investigation of acidity of stomach contents. Terap.arkh. 29 no.4; 24-27 Ap '57. (MIRA 10:10)

1. Iz 1-go terapeuticheskogo otdeleniya (nauchnyy rukovoditel' - prof. A.L.Vilkovyskiy) 4-iy kafedry terapii (zav. - chlen-korrespondent AMN SSSR prof. P.I.Yegorov) TSentral'nogo instituta usovershenstvovaniya vrachey na base TSentral'noy klinicheskoy bol'niцы Ministerstva putey soobshcheniya.

(CONDITIONED,

eff. of psychic phase of secretion on gastric acidity (Rus))

(GASTRIC JUICE,

acidity, eff. of psychic phase of secretion (Rus))

~~Effect of winter conditions on the blood of some freshwater fish. V. Iulvs. Eryth. Myktra. Osteobrama latipinnis. Pisces, Odz. Nauk. No. 4, 73-4 (1969). Aspius aspius maintains its erythrocyte count through the winter filtration period; pike perch shows a similar behavior except for a slow decline in erythrocytes through the winter; carp, and to a lesser extent Abramis brama, show a severe initial decline in erythrocyte count in winter period followed by an increase in March; Silurus glanis shows a initial decline, followed by a rise with max. in February, followed by a 2nd decline. Severe O deficiency generally aggravates the changes.~~
G. M. Kosulapoff

IVLEYEV, A.P.

Experience in operating the equipment of 110 kv. substation.
Energetik 10 no.4:29-30 Ap '62. (MIRA 15:4)
(Electric substations)

BIDA, Ye.M., inzh.; IVLEYEV, A.P., inzh.; VESELOVSKIY, A.P., inzh.;
POPOVNIN, M.G., inzh.

Use of transformer insulating oils in a municipal electric power
distribution network. Elek. sta. 35 no.11:60-63 N '64.

(MIRA 18:1)

1. Sverdlovskaya grodskaya elektroset' (for Bida). 2. Kuybyshev-
energo (for Ivleyev). 3. Ivanovskaya kabel'naya set' (for Vese-
lovskiy, Popovin).

AUTHORS: Ivlichev, Yu. I., Nadzhafov, E. M., SOV/103-19-11-1/10
(Moscow)

TITLE: Universal Pneumatic Multiplication-Division Unit and
Device for Automatic Square Rooting (Universal'noye pnevmaticheskoye mnozhitel'no-delitel'noye ustroystvo
i ustroystvo dlya izvlecheniya kvadratnogo kornya)

PERIODICAL: Avtomatika i telemekhanika, 1958, Vol 19, Nr 11,
pp 997 - 1009 (USSR)

ABSTRACT: Two devices are described here. They have been developed
in the Laboratory for Pneumohydroautomation of the Institute for Automation and Telemechanics AS USSR. The
multiplying and dividing device carried out the operation

$$P_4 = \frac{P_1 P_2}{P_3}$$
; P_4 - outlet pressure, P_1, P_2 and P_3 - inlet
pressures. The multiplying and dividing block is
described and in order to establish its static properties
the equations of the processes which have taken place

Card 1/3

Universal Pneumatic Multiplication-Division Unit
and Device for Automatic Square Rooting

S07/103-19-11-1/10

in the flow chambers as well as the equilibrium equations are derived for the forces on the rod. The static errors of the block are examined. The total relative static error is of 0,35%. The equation of the block dynamics is derived (31). From this it may be seen that the connections between the inlet and outlet pressures, even with the most simple model, are expressed by a complicated differential equation. A linear differential equation with constant factors is obtained only with $P_1 = \text{const}$ and $P_2 = \text{const}$. Description of the Universal Device for square rooting follows, which operates in the same manner as the multiplication block taking into consideration the equation $P_3 = P_4$. The static errors of this block are examined. The total relative static error is of 0,5%. The equation for the dynamics of this block (47) is derived. It is essentially non-linear. The results of the experimental examinations of both blocks are given. The tests proved that both show a specific rapid effect of 0,5 sec. From the examples given it may be seen that both blocks give exact results

Card 2/3

Universal Pneumatic Multiplication-Division Unit
and Device for Automatic Square Rooting

SOV/103-19-11-1/1c

up to the third stage. There are 8 figures and 5
Soviet references.

SUBMITTED: February 1, 1958

Card 373

PAGE 1 BACK MATTER

Sov/MSI

Abrasivnyi detsii SSSR. Izdatel'stvo zemstveni i tekhnicheskii. Seminar po
perekhodnoi tekhnicheskoye avtomatike. 2d i 3d sessionVoprosy perehoda i perekhodnoi (Problems in Pneumatic and Electronic Automation)
Sankt-Peterburg, 1980. Ed. D. S. Serebryakov. Issued 1,500 copies printed.Ivanov, Val. M. Aver'yanov, Doctor of Technical Sciences, Professor; 2d. of Publishing
House: A.M. Tsvet; Tech. Ed.; S.G. Timoshenko.PURPOSE: This collection of articles is intended for scientific workers, industrial
designers and engineers interested in automation and telecommunications.CONTENTS: The collection of 25 articles is a continuation of an earlier work of the
IITB in 1979. A wide range of problems connected with the design and operation
of pneumatic and hydraulic automation equipment is described. An addition to
problems based on experiments, this collection also contains discussions of new
ideas in the field of automation. As far as the possibility of using new low-cost materials for the
operation of pneumatic devices, some results of this collection were written in
the German Democratic Republic and in Czechoslovakia and reflect a somewhat differ-
ent approach to automation problems. No personalities are mentioned. References
occupy most of the articles.

PNEUMATIC AND HYDRAULIC REGULATORS AND SYSTEMS OF AUTOMATION

REGULATORS AND AUTOMATION OF PROCESS

Aksenov, Val. I. Pneumatic Characteristics of Pneumatic
Regulators and Hydraulic (Dynamic Characteristics of Air
Regulators and Pneumohydraulic Systems. Dynamic Assembly Systems) 27Vorob'ev, V. N. Design and Service Life of Automatic Regulation Systems 68Vorob'ev, V. N. Design and Service Life of Automatic Regulation Systems 79Vorob'ev, V. N. Small Radio-pneumatic Load Block of Compensation Type 89Vorob'ev, V. N. Method of Increasing the Life-Expectancy of Industrial Pneumatic
Components 93Vorob'ev, V. N. Small Electronic and Pneumatic Regulator 105Vorob'ev, V. N. Hydraulically Servo-Regulator - Non-oscillating 111Vorob'ev, Val. I. Design of Pneumatic Assembly System - Basis of a Complex
Automation in the Petroleum Refining Industry 123

PNEUMATIC COMPUTING-CONTROLS AND MEASURING INSTRUMENTS

Vorob'ev, V. N. and N. N. Matrosov. Construction Problems of Pneumatic
Computing-Controlling Devices 132Vorob'ev, V. N. Small Scale Pneumatic Continuous Action Calculating Machine
and the Daily Block 139Vorob'ev, Val. I. and A. I. Soshnikov. Investigation of Characteristics of
Pneumatic Chambers Used in Simulation 145Vorob'ev, V. N. and A. A. Tsvet. Pneumatic Throttles and Valve Regulators
for Pneumatic Devices for the Application of Pneumatic External
Regulators on Items With Several Regulating Components 154Vorob'ev, V. N. Design of Pneumatic Throttles and Valve Regulators 158Vorob'ev, V. N. Design of Pneumatic Control 162Vorob'ev, V. N. Design of Pneumatic Control and Regulating Control Chemical
Processes According to the General Scheme of the Reactor 162

PNEUMATIC AND ELECTRONIC AUTOMATION UNITS

22

THE GENERAL INSTITUTE OF HYDRAULIC AND COMBUSTION

Bryzgalov, V. (ed.). Hydraulic and Combustion Automatic Regulation Systems 175Petrov, V. (ed.). Components of Automatic Regulation 180Sosulin, V. (co-ed.). Pneumatic Regulators of the KFD-21 Plant 223

Kharlamov, Library of Congress (2700-832)

Card 5/5

Ac/ann/MSI

2-27

S/119/60/000/06/04/016
B014/B014

AUTHOR: Ivlichev, Yu. I., Engineer

TITLE: Summation of Pressures in a Pneumatic Chamber With a Compensating Choke

PERIODICAL: Priborostroyeniye, 1960, No. 6, pp. 9-12

TEXT: By way of introduction, the author describes the drawbacks of pneumatic diaphragm summators (Fig. 1) which may be replaced by other types based on the utilization of the interrelationship between the flows in a flow chamber (Fig. 2). The accuracy obtained with these summators is not very high, and is limited by the application of low pressure. In the present paper it is shown that an accuracy sufficient for practical purposes can be warranted by the use of a choke permitting a constant flow out of the chamber (Fig. 2). In studying the static properties of the summator the author proceeds from the assumption that the linear dependence of the rate of discharge does not depend on the flow direction. Formula (2) is derived for the pressure in the chamber. Next, the author gives a detailed description of the method used to raise the

✓ C

Card 1/2

S/119/61/000/002/003/011
B116/B203

AUTHOR: Ivllichev, Yu. I.

TITLE: Matrix representation of pneumatic schemes

PERIODICAL: Priborostroyeniye, no. 2, 1961, 8-9

TEXT: Differential equations or transfer functions are usually employed for investigations of pneumatic schemes. Resulting difficulties can be reduced by seeking a linear solution under linear conditions, and particularly by using the matrix calculus for these purposes. The matrices permit the required solutions to be fixed and, in the case of a unique solution, repeated intermediate conversions to be excluded. The principal advantage of the matrix representation consists in the possibility of multiplying chains of any elements. A pneumatic scheme of any complicity can be regarded as an element which, with maintenance of the basic properties, may be simplified or complicated. Another property in this respect is that the following four parameters of an element can be brought into agreement: pressure P_1 and quantity G_1 at the input, as well as pressure P_2 and quantity G_2 at the output. This fact is not affected by any change in structure. The problem

Card 1/4

Matrix representation ...

S/119/61/000/002/003/011
B116/B203

posed is considered to be linearly dynamic, and the following relation is established between the four parameters:

$$\begin{aligned} P_1(s) &= A_{11}(s) P_2(s) + A_{12}(s) G_2(s) \\ G_1(s) &= A_{21}(s) P_2(s) + A_{22}(s) G_2(s) \end{aligned} \quad (1),$$

where S is the operator argument, A are the operators or numbers. Equations (1) correspond to the square matrix 2 by 2:

$$A(s) = \begin{pmatrix} A_{11}(s) & A_{12}(s) \\ A_{12}(s) & A_{22}(s) \end{pmatrix} \quad (2).$$

This matrix entirely expresses the properties of the element by its coefficients. Therefore, a complicated form of the element obtained by the composition of elements may be regarded as a product of matrices

$$A(s) = \prod_1^n A_k(s) \quad (3),$$

where A_k is the matrix of the individual elements, and A the resulting matrix

Card 2/4

Matrix representation ...

S/119/61/000/002/003/011
B116/B203

leading to the new element. A table shows the matrices of the pneumatic elements determined in this way. Further, it is shown that the matrix of the element also contains its transfer function. If this function is regarded as the ratio of the operator of the output value to the operator of the input value (with respect to the pressures), the following is obtained from (1) on the assumption of $G_2 = 0$:

$$\frac{P_2(s)}{P_1(s)} = \frac{1}{A_{11}(s)} \quad (9).$$

Hence, it follows that the pressure transfer function of the pneumatic element is determined by the first coefficient of its matrix. There are 1 figure, 1 table, and 2 Soviet-bloc references.

Card 3/4

↓

Matrix representation ...

S/119/61/000/0C2/003/011
B116/B203

Legend to the table: Table of matrices of pneumatic basic elements. Left-hand column: diagram, right-hand column: matrix. R is the choke resistance, $C = V/R$, T is the pneumatic capacity (V is the chamber volume, R_g the gas constant, and T the absolute temperature).

1)		$\begin{pmatrix} 0 & 0 \\ 0 & 1 \end{pmatrix}$
2)		$\begin{pmatrix} 1 & R \\ 0 & 1 \end{pmatrix}$
3)		$\begin{pmatrix} 1 & 0 \\ \frac{1}{R} & 1 \end{pmatrix}$
4)		$\begin{pmatrix} 1 & 0 \\ -C & 1 \end{pmatrix}$
5)		$\begin{pmatrix} 1 & R \cdot C \\ 0 & 1 \end{pmatrix}$
6)		$\begin{pmatrix} 1 + R \cdot C & R \cdot C \\ 0 & 1 \end{pmatrix}$
7)		$\begin{pmatrix} \frac{R_1 \cdot R_2 + R_1 R_2 C S}{R_1 R_2} & R_1 R_2 C S \\ R_2 & 1 + R_2 C S \end{pmatrix}$
8)		$\begin{pmatrix} \frac{R_1 + R_2 + R_1 R_2 C S}{R_1 R_2} & R_1 R_2 C S \\ R_2 & 1 + R_2 C S \end{pmatrix}$
9)		$\begin{pmatrix} \frac{1}{R} & 0 \\ 0 & 0 \end{pmatrix}$

Card 4/4

24760

26.2190

S/119/61/000/007/004/008

D247/D306

AUTHORS: Ivlichev, Yu.I., and Ismiyev, E.A.

TITLE: A new principle of gas flow measuring

PERIODICAL: Priborostroyeniye, no. 7, 1961, 14 - 15

TEXT: This paper describes the construction, operation and presents the substantiation of the principle of a new gas flowmeter. The principle is based on the balance of flow through two throttles one of which has the same pressure as the throttle plate. Fig. 1 represents a schematic diagram of the flowmeter. It has a pneumatic follow-up system with a diaphragm D separating two chambers. One chamber is joined to the main pipe (pressure P_1) on the left of the throttle plate Th.P via a throttle Th₁. The other chamber has a direct connection to the other side of the throttle plate (pressure P_2). The first chamber has an outlet to pressure P_3 via the nozzle N, and with a gas exhaust pipe via throttle Th₂. The system works as follows: due to the flow of gas in the pipe of a differential pressure $P_1 - P_2$ is set up across

Card 1/4

24760

S/119/61/000/007/004/008
D247/D306

A new principle of gas flow...

the throttle plate. The same pressure difference exists across the throttle Th_1 owing to the action of the follow-up system. Thus $P_x = P_2$. As the result of pressure difference across the throttle Th_1 a flow of gas takes place through the throttle Th_2 . Therefore, the flow of gas through Th_1 can be determined from the magnitude of pressure P_3 in the chamber K. Consequently the pressure P_3 becomes the measure of gas flow through the throttle plate if the temperature compensation is provided. The compensation can be achieved either by maintaining the gas flowing through the throttle plate and through the throttle Th_1 at equal temperatures and the gas flowing through Th_2 at a constant temperature, or by providing temperature compensation of the gas flow through Th_2 . The latter method is simpler. It is obtained by making the flap F_1 of brass and the body of Th_2 of steel. An adjustable ring R_g provides the correct temperature compensation for various settings of the throttle. Full mathematical proof of the principle is given, the author arriving at the equation of

Card 2/4

24760
S/119/61/000/007/004/008
D247/D306

A new principle of gas flow...

flow through Th_2 (§),

$$G_3 = \frac{(P_3 - P_a) \dot{V}_a}{a_3}$$

where P_a - atmospheric pressure and $a_3 = C_2 T_3$, where T_3 - absolute temperature of gas passing through Th_2 , C_2 - throttle constant. Considering the excessive pressures with $G_2 = G_3$, $P_3 - P_a = C_2^2$

$T_3 G$, where $C = \frac{C_1 C_2}{P_a}$. This means that the flow in the pipe can be

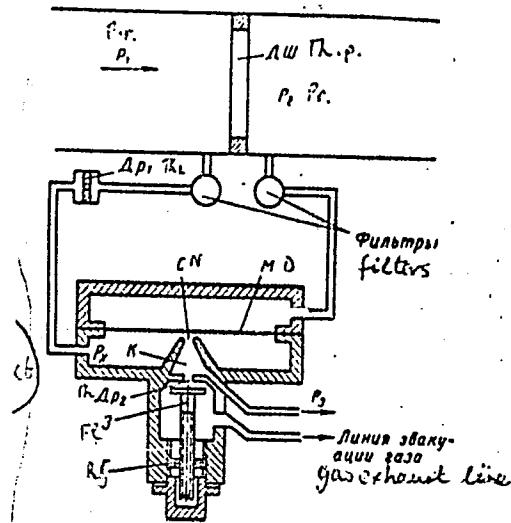
measured by means of the excessive pressure $P_3 - P_a$, if the temperature of gas flowing through Th_2 is constant, or if the flow G_3 is temperature-compensated. This principle of flow measurement is also applicable to liquids. According to calculations, the flow through the instrument represents only 10^{-8} of the main flow through a pipe of 1 m in diameter. It can be proved that the above principle of flow measurement complies with the requirements laid down in the rules of the Komitet standardov, mer i izmeritel'nykh priborov (Committee of Standards, Measures and

Card 3/ 4

A new principle of gas flow...

24760
S/119/61/000/007/004/008
D247/D306

Measuring Instruments). There are 2 figures.



26.2191
26957
S/019/61/000/012/070/121
A152/A128

AUTHORS: Ivlichev, Yu.I., and Ismiyev, E.A.
TITLE: A liquid or gas expenditure transmitter
PERIODICAL: Byulleten' izobreteniy, no. 12, 1961, 46

TEXT: Class 42e, 2320. No. 139098 (680315/26 of September 27, 1960).
1. Liquid or gas expenditure transmitter determining the expenditure by the pressure gradient, differing from others in that for the purpose of increasing the accuracy of measurement and simplifying the structural design, it is made up of two chambers devided by a membrane; one chamber is connected through a turbulent gate valve to the pipeline above the throttle disc, while the other is connected with the pipeline at a point beyond the throttle disc, and a thermostat for the maintenance of a constant temperature in the flow coming through a follow-up nozzle into the flow section with a linear throttle. 2. In this variant the body and the nozzle of the linear throttle are made from a material having a different linear expansion coefficient.

Card 1/1

44

IVLICHEV, Yu.I.

Matrix transfer functions. Priborostroenie no.2:8-10 F '62.
(MIRA 15:2)
(Matrices)

10273

26.2190 (2423)

5/019/62/000/015/029/039
A154/A126

AUTHOR: Ivlichev, Yu.I.

TITLE: A pneumatic adder

PERIODICAL: Byulleten' izobreteniy, no. 15, 1962, 45

TEXT: Class 42m, 15. No. 149269 (753530/26-24 of November 27, 1961). This pneumatic adder is built around a flow-through chamber between throttles. To increase the accuracy of the addition, a servo system is connected to the outlet of the flow-through chamber to keep the pressure in the latter constant. Another flow-through chamber with a linear throttle communicating with the atmosphere is connected to the outlet of the servo system.

[Abstracter's note: Complete translation]

Card 1/1

L 17888-63 EPR/EWG(s)-2/EWT(1)/BDS/ES(v) AFFTC/LSD/APGC Ps-4/
Pw-4/Pe-4 WW
ACCESSION NR: AP3004281 S/0119/63/000/007/0006/0009

70

AUTHOR: Ivlichev, Yu. I.; Ismiyev, E. A.

TITLE: Reducing jet reaction on the controlling element

SOURCE: Priborostroyeniye, no. 7, 1963, 6-9

TOPIC TAGS: hydraulic automatic system, pneumatic automatic system

ABSTRACT: Numerous experiments have shown that reducing the reaction in the jet-type controlling elements determines the quality of their operation. The article considers theoretically the reactive forces involved and offers an improved design where a special jet bushing is used instead of the usual jet nozzle. The theory is developed for a fluid and, hence, is claimed to be equally applicable to both liquid and gas media. The new design was experimentally verified with these results: (1) its static characteristics were not distorted when the controlling power was halved; (2) its dynamic characteristics were as

Card 1/2

L 17888-63

ACCESSION NR: AP3004281

good as those of the usual jet nozzle. Orig. art. has: 3 figures and 18 formulas.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 08Aug63

ENCL: 00

SUB CODE: IE

NO REF SOV: 007

OTHER: 000

Card 2/2

L 19881-63 EWT(d)/PDS
ACCESSION NR: AP3007291

S/0119/63/000/009/0008/0010

AUTHOR: Ivlichev, Yu. I.

TITLE: Static and dynamic linearization of pneumatic assemblies

SOURCE: Priborostroyeniye, no. 9, 1963, 8-10

TOPIC TAGS: linearization, static linearization, dynamic linearization, pneumatic device

ABSTRACT: The problem of linearization of throttle-type schemes is solved for purposes of developing analog pneumatic devices (measuring, controlling, computing) which could be directly connected to pneumatic or hydraulic final-control mechanisms. A simple throttle assembly is described mathematically assuming the conductances nonlinear and the nonlinear rate-of-flow obeying the Poiseuille formula. Simple mathematical operations result in an algorithm that describes a different scheme in which constant-pressure linear throttles are used and a

Card 1/2

L 19881-63

ACCESSION NR: AP3007291

unidirectional flow is ensured. The same method is extended over two throttle-type assemblies that can yield differential relations. Both schemes, linear statically and dynamically, can be materialized by means of throttles, simple followers, and pneumorelays. It is recommended that the constant pressure be 0.2 kg/cm^2 ; the suggested pressure upper limit is 1 kg/cm^2 . Orig. art. has: 2 figures and 12 formulas.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 07Oct63

ENCL: 00

SUB CODE: IE

NO REF SOV: 006

OTHER: 000

Card 2/2

USSR

L 261-64

BDS MLK(a)

ACCESSION NR: AP3007657

S/0286/63/000/011/0066/0066

AUTHOR: Ivllichev, Yu. I.; Ismiyev, E. A. O.

TITLE: Pneumatic vibration generator. Class 42, No. 155048

SOURCE: Byul. izobret. i tovarn. znakov, no. 11, 1963, 66

TOPIC TAGS: pneumatic vibration generator, vibration generator, serrate vibration, pneumatic vibrator, vibration generation

ABSTRACT: The patent introduces a vibration generator producing serrate-type vibrations of air or fluid pressure (Fig. 1 of the Enclosure). It contains a chamber with a spring-loaded diaphragm connected through a variable throttle with a source of constant pressure and, through a nozzle, with a constant-volume chamber. The latter chamber is connected through a valve with a third chamber which has a spring-loaded diaphragm and a variable throttle opening to the atmosphere. Orig. art. has: 1 figure.

ASSOCIATION: none

Card 1/3

L 261-64
ACCESSION NR: AP3007657

SUBMITTED: 27Nov63 DATE ACQ: 16Oct63 ENCL: 01
SUB CODE: SD NO REF SOV: 000 OTHER: 000

Card 2 / 3

L 261-64

ACCESSION NR: AP3007657

ENCLOSURE: 01

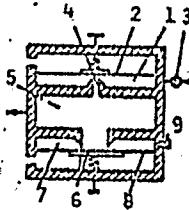


Fig. 1. Pneumatic vibration generator

1 - Chamber; 2 - spring-loaded diaphragm; 3 - variable throttle; 4 - nozzle; 5 - constant-volume chamber; 6 - valve; 7 - chamber; 8 - spring-loaded diaphragm; 9 - variable throttle.

Card 3/3

ACCESSION NR: AP4001599

S/0286/63/000/016/0078/0078

JSSR

AUTHOR: Ivlichev, Yu. I.; Ismiyev, E. A.

TITLE: Pneumatic vibration generator. Class 42, no. 156776

SOURCE: Byul. izobret. i tovark. znakov, no. 16, 1963, 78

TOPIC TAGS: pneumatic vibration generator, pressure oscillation, vibration generator, vibration

ABSTRACT: A pneumatic vibration generator containing a regulating valve connected to a constant pressure source. This valve is connected to reversing valves and to a chamber provided with a thick membrane. The distinguishing feature is that of obtaining relaxation oscillations rigidly related to each other in phase and rectangular oscillations. A triple-throttle valve is used as a regulating valve. This valve is rigidly connected to a membrane and is provided with a chamber open to the atmosphere. It is also connected through pneumatic throttles and incident-parallel switching reversing valves to a chamber provided with a flexible membrane.

ASSOCIATION: none

SUBMITTED: 300ct62

DATE ACQ: 02Dec63

ENCL: 01

SUB CODE: SD

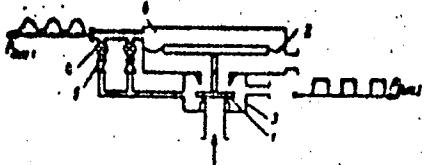
NO REF SOV: 000

OTHER: 000

Card 1/2

ACCESSION NR: AP4001599

ENCLOSURE: 01



1 - regulating valve; 2 - membrane; 3 - valve chamber;
4 - pneumatic throttles; 5 - reversing valves; 6 - membrane
chamber

Card 2/2

IVLICHEV, Yu.I.

Geometrical parameters of linear pneumatic chokes. Priborostroenie
no.11:15-16 N '63. (MIRA 16:12)

ACCESSION NR: AP4042897

S/0119/64/000/007/0001/0005

AUTHOR: Ivlichev, Yu. I. (Candidate of technical sciences); Ismiyev, E. A. (Engineer)

TITLE: Universal pneumatic oscillator

SOURCE: Priborostroyeniye, no. 7, 1964, 1-5

TOPIC TAGS: oscillator, pneumatic oscillator, pressure oscillation, square waves, sawtooth waves

ABSTRACT: A laboratory-type pneumatic oscillator which generates cophasal and synchronous sawtooth and square oscillations is described. The oscillator is based on a two-seat pneumatic valve whose stem is fastened to diaphragm 8 (see Enclosure 1) which is part of chamber 5. The diaphragm vibrates, establishing sort of relaxation oscillations in chamber 5 while almost square oscillations are produced in chamber 4. A design drawing and formulas for the oscillator are

Card 1/3

ACCESSION NR: AP4042897

supplied. A laboratory model was tested at industrial-pneumatic-device pressures and also at elevated pressures up to 3 atm. Wave shapes were recorded (by manometers) at 0.16-0.365 cps; at lower frequencies, the sides of the sawtooth were near-exponential, and the trailing edge of the square pulse was beveled; at higher frequencies, the wave shapes were better. Frequencies up to a few dozen cps were attained. A 0.04-mm-thick vinyl-chloride diaphragm withstood 17 million cycles during laboratory tests. Orig. art. has: 4 figures and 15 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SUB CODE: EC

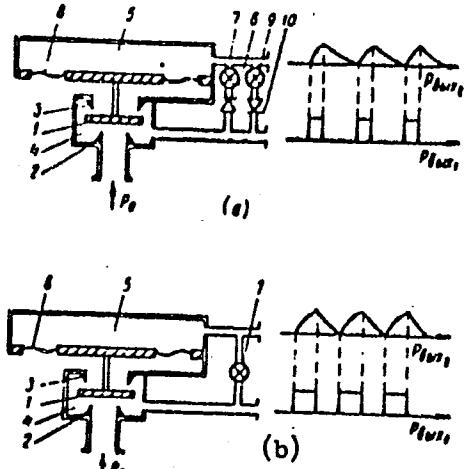
NO REF SOV: 006

OTHER: 001

Card 2/3

ACCESSION NR: AP4042897

ENCLOSURE, 01



Pneumatic oscillators: (a) universal,
(b) simplified

- 1 - valve
- 2 - lower valve seat
- 3 - upper valve seat
- 4 - square-pulse chamber
- 5 - sawtooth-pulse chamber
- 6 - 10- pneumatic detector (valve)
- 7 - 9 - throttle
- 8 - vinyl-chloride diaphragm

Card 3/3

VERIFIED, 01/01/67, 100% (100%), 100% (100%), 100% (100%),

Universal automotive protection device. Case. Prod. Code, 170
25-29 '67. (NIMA 17-12)

IVLICHEV, Yu.I., kand. tekhn. nauk

Gas and hydrodynamic functions and the circle diagram. Priberastrenie
no.6:9-11 Je '65. (MTRA 28:7)

IVLIYEV, A.; TELEGIN, M.

Victory of Ufa drivers. Za rul. 17 no.11:10-12 N '59.

(MIRA 13:4)

1. Predsedatel' Soyuz sportivnykh obshchestv i organizatsiy Bashkirskoy ASSR (for Ivliyev). 2. Spetsial'nyy korrespondent zhurnala "Za rulem" (for Telegin).
(Mototcycle racing)

IVANOV, V. N., et al. (eds.)

Technical directions concerning the operational and economic
basis of prospective vessel types for river transportation. Study
1127 no. 6515-14 '64. (MIRA 18:10)

171157, .. L.

Pruzhinnye instrumenty i prisposobleniya [Spring tools and attachments]. Moscow, Rosgizmestprom, 1952. 40 p.

SO: Monthly List of Russian Accessions, Vol 6 No 4, July 1953

IVLIYEV, I., direktor-polkovnik administrativnoy sluzhby.

Potentialities for the lowering of costs in transportation in the
new five-year plan. Zhel. dor. transp. no.1:22-30 '47.

(MIRA 13:2)

(Railroads--Cost of operation)

IVLIYEV, I.

Business accounting in railroad transportation. Vop. ekon. no.10;
36-48 0 '56.
(MLRA 9:11)

(Railroads--Accounting)

SOV/81-59-5-17509

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 5, p 528 (USSR)

AUTHORS: Shreyber, V.N., Ivliyev, I.N.

TITLE: Modern Plastic Materials Used in Radio-Engineering

PERIODICAL: Za tekhn. progress (Sovnarkhoz Gor'kovsk. ekon. adm. r-na),
1958, Nr 5, pp 23 - 27

ABSTRACT: The main properties and the fields of application of thermo-plastic and thermo-reactive insulating plastics, polyamide resins, glass textolites, epoxide resins and epoxide-polyester compounds are listed, as well as thermoreactive MEK compounds after hardening.

A. Vavilova

Card 1/1

BIRMAN, A.M., doktor ekonom.nauk; BRAZOVSKAYA, T.I.; BELOUSHOVICH, S.N.;
VESELKOV, F.S.; KATSENELEMBAUM, Z.S.; IVILYAN, I.V.; SEMENOV, I.Ya.;
YAKOVLEV, M.S.; LAYKHTMAN, R.I.; GOFMAN, G.A.; SHUMOV, N.S.;
VINOGRADOV, R.D., dotsent; TATSIY, G.M., red.; KONDRAT'YEVA, A., red.;
TELEGINA, T., tekhn.red.

[Finances of enterprises and branches of the national economy]
Finansy predpriatii i otriaslej narodnogo khoziaistva. Avtorskii
kollektiv pod rukovodstvom A.M.Birmana. Moskva, Gosfinizdat, 1960.
576 p. (MIRA 14:3)

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(Finance)

IVLIEV, I. V.

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[The main feature of the plan for the first year of the second five-year plan for railroad transportation]. (Sots. transport, 1933, no. 1-2, p. 39-48).

DLC: HE7.36

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

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DLC: HE7.S6

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"Presents accounting forms and data which at least indicate proportions."

DLC:HE3136.I 9

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DLC:HE7.Z5

Vosstanovlenie dovoennoi rentabel'nosti transporta - vazhneishaya zadacha. /Restoration of the prewar profitability of transportation - is the most important task/. (Zhel-dor. transport, 1948, no. 8, p.10-18).

DLC:HE7.Z5

SO: Soviet Transportation and Communications, A Bibliography. Library of Congress Reference Department, Washington 1952, Unclassified.

BARANOV, A.F., redaktor; BIZYUKIN, D.D., redaktor; VAKHIN, M.I., otvetstvennyy redaktor toma, professor, doktor tekhnicheskikh nauk; VEDENISOV, B.N., glavnnyy redaktor; IVLIYEV, I.V., redaktor; MOSHCHUK, I.D., redaktor; RUDOV, Ye.P., SHILAEVSKIY, V.A., redaktor; SOLOGOUBOV, V.N., redaktor; SHANSHKIN, B.T., inzhener; AFANAS'YEV, Ye.V., laureat Stalinskoy premii, inzhener; BELENKO, K.M., dotsent; BORISOV, D.P., dotsent, kandidat tekhnicheskikh nauk; ZHIL'TSOV, P.N., inzhener; ZBAR, N.R., inzhener; IL'YENKOV, V.I., dotsent, kandidat tekhnicheskikh nauk; KAZAKOV, A.A., kandidat tekhnicheskikh nauk; KRAYZMER, L.P., kandidat tekhnicheskikh nauk; KOTLYARENKO, N.P., dotsent, kandidat tekhnicheskikh nauk; MAYSHEV, P.V., professor, kandidat tekhnicheskikh nauk; MARKOV, M.V., inzhener; NELEPETS, V.S., dotsent, kandidat tekhnicheskikh nauk; NOVIKOV, V.A., dotsent; ORLOV, N.A., inzhener; PETROV, I.I., kandidat tekhnicheskikh nauk; PIVKO, G.M., inzhener; PODGIN, A.M., inzhener; RAMILAU, P.N., dotsent, kandidat tekhnicheskikh nauk; ROGINSKIY, V.N., kandidat tekhnicheskikh nauk; RYAZANTSEV, B.S., laureat Stalinskoy premii, dotsent, kandidat tekhnicheskikh nauk; SNAERSKIY, A.A., inzhener; FEL'DMAN, A.B., inzhener; SHASTIN, V.A., laureat Stalinskoy premii, inzhener; SHUR, B.I., inzhener; GONCHUKOV, V.I., inzhener, retsensent; NOVIKOV, V.A., dotsent, retsensent; AFANAS'YEV, Ye.V., laureat Stalinskoy premii, retsensent;

[Technical handbook for railroad men] Tekhnicheskii spravochnik zhelez-nodorozhnika, Vol. 8. [Signaling, central control, block system, and communication] Signalizatsiya, tsentralizatsiya, blockirovka, sviaz'. Red. kollegiia A.F. Baranov [1 dr.] Glav.red. E.F. Rudoi. Moskva, Gos. transp. zhel-dor. izd-vo, 1952. 975 p. (Continued on next card)

BRYLEYEV, A.M., laureat Stalinskoy premii, inzhener, retsenzent; GAMBURG, Ye.Yu., inzhener, retsenzent; GOLOVKIN, M.K., inzhener, retsenzent; KAZAKOV, A.A., kandidat tekhnicheskikh nauk, retsenzent; KUT'IN, V.M., dotsent, kandidat tekhnicheskikh nauk, retsenzent; LEONOV, A.A., inzhener, retsenzent; SEMENOV, N.M., laureat Stalinskoy premii, inzhener, retsenzent; CHERNTSHEV, V.B., inzhener, retsenzent; VALUYEV, G.A., inzhener, retsenzent; METTAS, N.A., laureat Stalinskoy premii, inzhener, retsenzent; NOVIKOV, V.A., dotsent, retsenzent; PIVOVAROV, A.L., inzhener, retsenzent; POGODIN, A.M., inzhener, retsenzent; KHODOROV, L.R., inzhener, retsenzent; PIVOVAROV, A.L., inzhener, retsenzent; POGODIN, A.M., inzhener, retsenzent; KHODOROV, L.R., inzhener, retsenzent; SHUPOV, V.I., kandidat tekhnicheskikh nauk, retsenzent; KLYKOV, A.F., inzhener, retsenzent; YUDZON, D.M., tekhnicheskiy redaktor; VERRINA, G.P., tekhnicheskiy redaktor.

[Technical handbook for railroad men] Tekhnicheskii spravochnik zheleznodorozhnika. Vol. 8. [Signaling, central control, block system, and communication] Signalizatsiya, tsentralizatsiya, blokirovka, sviaz'. Red. kollegiia A.F.Baranov [i dr.] Glav.red. E.F.Rudoi. Moskva, Gos. transp. zhel-dor. izd-vo, 1952. 975 p. (Card 2) (MLRA 8:2) (Railroads--Signaling) (Railroads--Communication systems)

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ABAKUMOV, S.I., redaktor [deceased]; IVLIYEV, I.V. redaktor; KHACHATUROV,
T.S., redaktor; SHUBNIKOV, A.K., redaktor

[Technical reference book for railroad engineers] Tekhnicheskii spravochnik zheleznodorozhnika. Red.kollegiia: S.I.Abakumov, i dr. Moskva,
Gos.transportnoe zhel-dor.izd-vo Vol.11[Planning, financing and
accounting in railroad transportation] Planirovaniye, finansirovaniye i
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1955. 697 p.

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IVLIYEV, I.V.

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8-15 Ag '55. (MIRA 12:8)

1. Nachal'nik finansovogo upravleniya Ministerstva putey soobshcheniya.
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(Continued on next card)

ALFEROV, A.A. ---- (continued) Card 2.

MOSKVIN, G.N., redaktor; RUBINSHTEYN, S.A., redaktor; TSYPIN, G.S., redaktor; CHERNYAVSKIY, V.Ya., redaktor; CHERNYSHOV, V.I., redaktor; CHERNYSHEV, M.A., redaktor; SHADUR, L.A., redaktor; SHISHKIN, K.A., redaktor

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ARKHANGEL'SKIY, Anatoliy Serapionovich; VLIYEEVA, I.V., red.; POTAPOVA, V.P., red.; KARPOVA, N.L., red.; BOBROVA, Ye.N., tekhn.red.

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(MIRA 13:12)

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ALEKSEYEV, V.N.; VINOGRADOV, A.N.; kand.ekon.nauk; VLADIMIROV, V.A.; inzh.; KOCHETOV, I.V., prof., doktor ekon.nauk; MINAKOV, P.F.; POTAPOV, I.A.; ROMANOV, M.P., dotsent, kand.ekon.nauk; SPENGLER, Ye.N., kand.ekon.nauk; SHITOV, A.V.; SHUKHATOVICH, I.M.; YAKUBOV, L.S.; IVILYEV, I.V., red.; KRISHTEL', L.I., red.; KOCHETOV, I.V., prof., doktor ekon.nauk, nauchnyy red.; IVANOV, A.P., nauchnyy red.; BOBROVA, Ye.N., tekhn.red.

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(Railroads--Accounts, bookkeeping, etc.)
(Railroads--Statistics)

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cheniya.

(Railroads--Finance)

BELYUNOV, S.A., inzh.; DMITRIYEV, V.I., dots., kand. ekon. nauk; KUCHURIN, S.F.; LIN'KOV, M.V.; MULYUKIN, F.P.; NEDOPEKIN, G.K., inzh.; PUZNYA, I.Ye., inzh.; RAYKHER, G.Kh., inzh.; TRUBACHEV, T.Ye., inzh.; TTVANCHUK, D.P., inzh.; UMBLIYA, V.E., kand. ekon. nauk; KHOKHLOV, N.F., dots. kand. ekon. nauk; CHUDOV, A.S., prof., doktor ekon. nauk; ERLIKH, V.S., inzh.; IVLIYEV, Ivan Vasil'yevich, red.; KRISHTAL', L.I., red.; KHITROV, P.A., tekhn. red.

[Planning in railroad transportation] Planirovaniye na zheleznodorozhnom transporte; spravochnik. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshchenii, 1961. 470 p. (MIRA 14:11)
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Vasil'yevich; POTAPOV, I.A.; TRUBIKHIN, M.G., kand.ekon. nauk;
TUKHOVITSKAYA, L.K., inzh.; TYVANCHUK, D.P., inzh.; SHERMAN,
A.Ya.; SHCHERBAKOV, P.D., inzh.; EVENTOV, G.S.; KRISHTAL', L.I.,
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1. Nachal'nik Finansovogo upravleniya Ministerstva putey
soobshcheniya.
(Railroads--Rates)

IVLIYEV, I.V.; PETRUKHNOVSKIY, I.V. retsenzent ; KRIMNUS, G.Kh.
retsenzent ; NAUMOV, G.I. retsenzent ; ORLOV, V.N.
retsenzent ; TUCHKEVICH, T.M. retsenzent ; USHAKOV, P.S.
retsenzent ; CHERNUKHA, N.T. retsenzent ; EDEL'SHTEYN,
P.G. retsenzent ; KRISHTAL', L.I., red.; VINNICHENKO, N.G.,
kand. ekon. nauk, red.; USENKO, L.A., tekhn.red.

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soobshcheniya.
(Railroads--Freight)

Ivliyev, L.A.

USSR / Forestry. Forest Economy.

K-4

Abs Jour: Ref Zhur - Biologiya, No. 1, 1958, 1354

Author : Ivliyev, L.A.

Title : The Rational Use of Withering Stands of Timber
in Seats of the Siberian Silkworm

Orig Pub: Lesn. kh-vo, 1957, No. 6, 54-56

Abstract: No abstract.

Card 1/1

IVLIYEV, L.A.; KONONOV, D.G.

Hylemia laricicola Karl, a widespread larch pest on Kamchatka. Izv.
Sib. otd. AN SSSR no. 9:157-163 '60. (MIRA 13:11)

1. Dal'nevostochnyy filial Sibirekogo otdeleniya AN SSSR.
(Kamchatka--Larch--Diseases and pests)

KURENTSOV, A.I.; IVLIYEV, L.A.

Pests of the Japanese stone pine on Kamchatka. Izv. Sib. otd.
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1. Dal'nevostochnyy filial Sibirskogo otdeleniya AN SSSR.
(Kamchatka--Pine--Diseases and pests)